

Notice of Allowability

Application No.

10/026,961

Examiner

Matthew Landau

Applicant(s)

HA ET AL.

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed February 28, 2006.
2. ☒ The allowed claim(s) is/are 1-9 and 15-22.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Valerie Hayes (Reg. #53,005) on April 27, 2006.

Please amend the claims as follows:

Cancel claims 10-14.

1. (Currently Amended) A liquid crystal display device including a data line supplied with a data signal, a gate line supplied with a scanning signal, a pixel electrode for driving a liquid crystal cell, and a thin film transistor for responding to the scanning signal to switch the data signal to the pixel electrode, the device comprising:

a storage electrode having a first region overlapping the gate line to form a storage capacitor, a second region offset from and parallel to the gate line, and a third region at respective ends of the storage electrode;

a first protective layer having non-contiguous portions at the respective ends of the storage electrode in a layer between the storage electrode and the pixel electrode, wherein the storage electrode is directly connected to the pixel electrode on an entire upper surface of the second region of the storage electrode; and

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a second protective layer formed between a gate insulating film and the pixel electrode.

6. (Currently Amended) A liquid crystal display device including a data line supplied with a data signal, a gate line supplied with a scanning signal, a pixel electrode for driving a liquid crystal cell, and a thin film transistor for responding to the scanning signal to switch the data signal to the pixel electrode, the device comprising:

a storage electrode having a first region overlapping the gate line to form a storage capacitor, a second region offset from and parallel to the gate line; and

the pixel electrode completely covering an upper surface and side edges of the storage electrode, wherein the storage electrode is directly connected to the pixel electrode on an entire upper surface of the second region of the storage electrode.

15. (Currently Amended) A liquid crystal display device, comprising:

first and second substrates;

a gate line and a data line over the first substrate, the data line crossing the gate line to define a pixel region;

a thin film transistor having source and drain electrodes at the crossing of the gate line and data line;

a storage electrode having a first region over the gate line, a second region offset from and parallel to the gate line, and a third region at respective ends of the storage electrode;

a pixel electrode over the storage electrode;

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a first protective layer having non-contiguous portions at the respective ends of the storage electrode in a layer between the storage electrode and the pixel electrode, wherein the pixel electrode directly connects to the storage electrode on an entire upper surface of the second region;

a second protective layer formed between a gate insulation film and the pixel electrode;
and

a liquid crystal layer between the first and second substrates.

Drawings

The drawings were received on February 28, 2006. These drawings are acceptable.

Allowable Subject Matter

Claims 1-9 and 15-22 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claims 1 and 6, the prior art of record, either singularly or in combination, does not disclose or suggest the combination of limitations including the storage electrode is directly connected to the pixel electrode on an entire upper surface of the second region of the storage electrode.

Regarding claim 15, the prior art of record, either singularly or in combination, does not disclose or suggest the combination of limitations including the pixel electrode directly connects to the storage electrode on an entire upper surface of the second region

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Landau whose telephone number is (571) 272-1731.

The examiner can normally be reached from 8:30 AM - 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Parker can be reached on (571) 272-2298. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should any questions arise regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Matthew C. Landau

KENNETH PARKER
SUPERVISORY PATENT EXAMINER

April 27, 2006